REMARKS

Claims 5, 6, 9-12, and 14-16 are pending in the present application.

Applicants wish to thank Examiner Tran for the helpful and courteous discussion with their undersigned Representative on January 14, 2005. During this discussion, several arguments and amendments were discussed to overcome the rejections over the art of record. The content of this discussion is reflected by the amendments and remarks set forth herein.

The rejections of (a) Claims 5-10 and 15 under 35 U.S.C. §103(a) over Gram et al in view of Pecht et al and the Examiner's interpretation of the specification at page 3, lines 19-22, and (b) Claims 11-12 and 16 under 35 U.S.C. §103(a) over Gram et al in view of Pecht et al and the Examiner's interpretation of the specification at page 3, lines 19-22, and Barbas et al, are obviated by the amendment herein above.

The present invention provides a method for *in vitro* detection of a gene encoding a drug-targeted protein, comprising

linking an antigenic substance to a drug via a chemical cross-linker to form a probe, wherein the drug is non-protein and *per se* exhibits no antigenicity and wherein the antigenic substance is serum albumin or fluorescein isothiocyanate and wherein the chemical cross-linker is selected from the group consisting of glutaraldehyde, hexamethylene diisocyanate, hexamethylene diisothiocyanate, N,N'-poly(methylene)bis(iodoacetamide), N,N'-ethylenebis(maleimide), ethylene glycol bis(succinimidyl) succinate, sulfosuccinimidyl-4-(p-maleimidophenyl) buryrate, and bisdiazobenzidine;

screening for the gene encoding a protein targeted by said drug, wherein said protein is expressed from a cDNA expression library ***from a human cell***, by using an antigen-

antibody reaction between the antigenic substance of the probe and a labeled antibody specific for the antigenic substance; and

determining the gene sequence of the protein expressed from the cDNA expression library within the probe-bound is contained in a phage vector (see Claim 5).

Applicants note that, for the following reasons, the art of record cannot affect the patentability of the presently pending claims.

Gram et al disclose a method for *in vitro* detection of monoclonal antibodies from a combinatorial library that bind to a progesterone-bovine serine albumin conjugate. However, Applicants note that the disclosure by Gram et al is limited to cDNA libraries of *mouse* origin (see page 3577, left column, under "RNA Isolation and cDNA Synthesis"), whereas the present invention is limited to a cDNA source of *humans*. MPEP §2142 states: "To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation... to modify the reference... Second, there must be a reasonable expectation of success. Finally, the prior art reference... must teach or suggest all the claim limitations." At no point do Gram et al disclose or suggest using human cDNA. Further, Pecht et al, the specification at page 3, lines 19-22, and Barbas et al also fail to disclose or suggest such a modification. Therefore, the first and third criteria of MPEP §2142 are not satisfied and, as such, no *prima facie* case of obviousness can be found.

Moreover, Applicants submit that the rejection is flawed and cannot stand because (in addition to the foregoing) there would be no motivation to combine the disclosures of Gram et al and Pecht et al. Specifically, Applicants note that Gram et al and Pecht et al are nonanalogous art (i.e., different fields of endeavor) as are the present invention and the disclosure of Pecht et al. As the examiner notes, Gram et al disclose a method for *in vitro* detection of monoclonal antibodies from a combinatorial library that bind to a progesterone-bovine serine albumin conjugate (e.g., phage display), which requires intact cells. In

contrast, Pecht et al disclose bifunctional reporters for immunoprecipitation methods. As is widely appreciated by anyone possessing a technician's level of training in the art, phage display and immunoprecipitation are completely distinct methods, which operate in virtually opposite manners (*i.e.*, phage display requires intact cell membranes, while immunoprecipitation requires lysed cells in order to operate). Accordingly, in view of the significant divergence in the techniques of Gram et al and Pecht et al, there would be no motivation to combine the disclosures of these references.

Moreover, as conceded by the Examiner, Gram et al is silent with respect to the specific cross-linking agents in previously Claim 5 from which the remaining claims depend. Where Gram et al is cited for disclosing a probe for phage-display containing progesterone (*i.e.*, "drug") cross-linked to BSA, Pecht et al and the disclosure in the present specification at page 3, lines 19-22 are cited to show that the claimed cross-linkers (*e.g.*, glutaraldehyde) are commonly used to cross-link "drugs" to BSA. Barbas et al is cited as disclosing the use of nitrocellulose filters with isopropyl-b-D-thiogalactopyranoside to capture a phage from plated phage culture. However, even if the skilled artisan were to combine the disclosures of the Gram et al, Pecht et al, the Examiner's interpretation of the specification at page 3, lines 19-22, and Barbas et al the combined disclosures still fail to compensate for the aforementioned deficiencies in the disclosure of Gram et al (no disclosure of human cDNA) and the combined disclosures of Gram et al and Pecht et al (nonanalogous art).

Accordingly, Applicants request withdrawal of these grounds of rejection.

Finally, Applicants remind the Examiner that withdrawn subject matter, including Claim 14, should be rejoined and examined once the elected subject matter has been found allowable. Acknowledgement to this effect is requested.

Applicants submit that the present application is now in condition for allowance.

Early notification of such action is earnestly solicited.

Respectfully submitted,

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